

FRASHERI, M. R., Cand. of Bio Sci -- (dies) "Role of Hydroxylamine  
in Nitrogen Exchange of Plants," Moscow, 1959, 21 pp (Institute  
of Biochemistry im Baku, Acad Sci USSR) (KL, 2-60, 112)

KRETOVICH, V.L.; BUNDL', A.A.; FRASHERI, M.R.; BOROVIKOVA, N.V.

Effect of hydroxylamine on the growth of wheat. Fiziol.rast.  
7 no.3:261-268 '60. (MIRA 13:6)

I. A.N. Bakh Institute of Biochemistry, U.S.S.R., Academy of  
Sciences, Moscow.

(Plants, Effect of hydroxylamine on)

VARNKE, G. [Warnke, H.]; FRASHON, Benua; UILL'YAMS, Ted [Williams, Ted];  
SALLANSALO, Vaine

The proletariat closes its ranks. Sov.profsoiuzy 17 no.22:28-31  
N '61. (MIRA 14:10)

1. Predsedatel' Ob'yedineniya svobodnykh nemetskikh profsoyuzov  
Germanskoy Demokraticheskoy Respubliki (for Varnke). 2. Gene-  
ral'nyy sekretar' Vseobshchey konfederatsii truda Frantsii (for  
Frashon). 3. Chlen ispolkoma profsoyuza kotel'shchikov i sudo-  
stroiteley Anglii (for Uill'yams). 4. Predsedatel' profsoyuza  
fabriki iskusstvennogo volokna v Valkeakoski, Finlyandiya (for  
Sallansalo).

(Trade unions)

FRASIE, D.

"8 years of experience."

p. 1 (Drumul Belsugului) No. 8, Aug. 1957  
Bucharest, Rumania

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,  
April 1958

"The Dobruja steppe is flourishing; notes on a cooperative agriculture in the Constanța District."

p. 3 (Drumul Belsugului) No. 8, Aug. 1957  
Bucharest, Rumania

SO: Monthly Index of East European Accessions (MEAI) LC. Vol. 7, no. 4,  
April 1958

FRASIE, D.

"The main link."

p. 15 (Drumul Belsugului) No. 11, Nov. 1957  
Bucharest, Rumania

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,  
April 1958

TOPCIU, VI.; MARIN, I.; CUCURUZ, L.; ELIAS, I.M.; REICHRATH, S.; FORSCHE, T.;  
FRASINEL, N.

Isolation of strains of pathogenic *Leptospira* from rodents and humans.  
Stud. cercet. inframicrobiol., Bucur. 8 no.1:115-120 1957.

(LEPTOSPIRA

pathogenic strains isolated from rodents & humans in Rumania)

TOPICU - continued)

SURNAME, Given Names

Country: Russia

Academic Degrees: [Not given]

Affiliation: Epidemiology Section of the Timisoara Branch of the NPI Institute of Health  
(Sectia de Epidemiologie--Institutul de Igiena NPI, Filiala Timisoara) and  
the Ronat Health Circumscription (Circumscripția Sanitara Ronat), Ronat, Timi  
soara

Source: Timisoara, Timisoara Medical, No 2, Jul-Dec 60, pp 63-69

Data: "The Discovery of Coxsackie Virus in a Poliovirus Focus."

Co-authors:

FRASINEL, N., Epidemiology Section of the Timisoara Branch of the NPI Institute  
of Health; and the Ronat Health Circumscription, Ronat, Timisoara.

IONESCU, S., [Affiliation same as above]



Given names

Country: Rumania

Academic Degrees: not given-

Affiliation: \*)

Source: Timisoara, Timisoara Medicala, Vol VI, No 1, Jan-Jun 1961, pp 62-70.

Data: "Studies on the Naso-Pharyngeal Flora in Children Between 0 and 15 Years of Age in an Isolated Community During the Spring Season."

Authors:

ZALMAN, M.

ELIAS, A.

FRASINEL, N.

GHERMAN, D.

LEVIN, S.

MOISE, O.

\*) Work performed at the Epidemiology Section of the Institute of Hygiene and the Microbiology Laboratory of the Medico-Pharmaceutic Institute (Sectia de Epidemiologie a Institutului de Igiena si Laboratorul de Microbiologie I.M.F.), Timisoara.

ZALMAN, Maria, V.; FRASINEL, N.; NEAGOE, N.

Phagocytosis of pathogenic staphylococci under the action of antibiotics. Arch. roum. path. exp. microbiol. 22 no.4:919-930 S-D'63.

1. Travail de l'Institut Medico-Pharmaceutique de Timisoara; Chaire de Microbiologie.

ROMANIA

FRASINEL, N.; ZALMAN, M., Prof.; IOŢCOVICI, S.

Timişoara, Timişoara Medicală, No. 3, July-September  
1965, pp 275-277

"Modifications in the Pigmentogenesis of Staphylococcus  
Aureus Under the Influence of Physico-Chemical Factors"

FRASTACKY, S.

The Society of Natural History in Nitra at the end of the 19th century. p.73.  
(Biologia, Vol. 12, No. 1, 1957, Bratislava, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 9, Sept. 1957. Uncl.

~~FRAS'ACKY, S.~~

Removal of prosthesis of the biliary tract by the nasal route. Rozhl.  
chir. 38 no.8:516 520 Aug 59

1. Chir. odd. KUNZ v Nitre, prednosta primar MUDr. S. Frastacky.  
(BILIARY TRACT, surg.)

FRASTACKY, Stefan

The large intestine as a graft. Lek. prac. [Biol. lek.] 2 no.1:1-106  
'62.

1. Chirurgické oddelenie OUNZ, Nitra.

(INTESTINE LARGE transpl)

FRASTIA, inz.

Improved anchoring of tie-bars into concrete railway ties. Zel dop tech  
10 no. 3: 84. '62

1. Vyzkumny ustav dopravní, Bratislava.

FRASTIA, P.; ZALCIK, R.

"Economical and durable pine sleepers."

p. 141 (Dřevarský Vyskum) Vol. 2, no. 2, Oct. 1957  
Prague, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,  
April 1958



FRASUNKIEWICZ, Ludwik (Poznan)

Building in Poznan and the Poznan Voivodeship during  
1961-1965. Przegl budowl i bud mieszk 33 no.11:650-652,  
687 N '61.

FRASYNYUK, A., komandir podrazdeleniya (Simferopol'); DERYABIN, V., inzh.  
po spetsprimeneniyu aviatsii (Simferopol')

A good harvest, high profits. Grazhd. av. 22 no.12:9 D '65.  
(MIRA 18:12)

Fraszczak A.

Fraszczak A., Eng. "Observations on the 'Sodafos' Water Softening Method."  
(Observacje nad zmiekczeniem wody metoda "Sodafos".) Przegląd Kolejowy,  
No. 7, 1949, pp. 209-213.

Observations of water softening carried out by the "Sodafos" method, in relation to 70 engines, in one of the main engine depots of the Polish State Railways, resulting in considerable savings in boiler cleaning in the course of one year and in increased engine run and in the quantity of gross ton-mileage, as well as in a reduction of the number of service engines and in current repair costs.

SO: Polish Technical Abstracts - No. 2, 1951

CZECHOSLOVAKIA

FRATER, A.: Office of Architectural Theory and Creation of Life Surroundings, Czechoslovak Academy of Sciences (Kabinet Teorie Architektury a Tvorby Zivotniho Prostredi CSAV), Prague.

"Family Relations of Children with Asthma and Enuresis in Bene-Anthony Test."

Prague, Ceskoslovenska Psychiatrie, Vol 62, No 3, Jun 66, pp 197-201

Abstract: Connection between asthma and enuresis, and changes in the family surroundings of the children are discussed. Suitable methods for investigation of this problem are described. The influence of an incomplete family on the problem is evaluated. Different reactions of boys and girls to the problems caused by the two afflictions are described. 4 Figures, 1 Table, 2 Western, 3 Czech references. (Manuscript received 17 Jun 64.)

1/1

- 44 -

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413610018-7"

FRATER, I.

Laboratory investigation of the pulverization possibilities for Hungarian varieties of coal.

p. 182 (Energia es Atomtechnika) Vol. 10, no. 4, Aug. 1957, Budapest, Hungary

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC, VOL. 7, NO. 1, JAN. 1958

WALD, B.; FRATER, I.

Bozoky's condenser in comparative measurement of the dispersion  
dose in roentgenotherapy of breast cancer. Magy. radiol. 3  
no.3:136-140 1951. (CML 20:11)

1. Doctors. 2. Lorand Eotvos State Radium and Roentgen Institute  
(Director -- Prof. Dr. Bela Wald).

VARTERGUSZ, Vilmos; FRATER, Istvan; KALMAN, Erzsébet; WALD, Bela

Plasma and whole blood volume in dogs after total body x-ray radiation with lethal doses over 50. Kísérletes orvostud. 8 no.1: 12-21 1956.

1. Országos Onkológiai Intézet Sugárbiológiai Osztálya.

(ROENTGEN RAYS, eff.

total body, lethal dosage, on plasma and whole blood volume in dogs (Hun))

(BLOOD, eff. of radiations on

total body x-ray, lethal dosage, on plasma & whole blood volume in dogs (Hun))

VARTERESZ, Vilmos; FRATER, Istvan; WALD, Bela.

Condition of extracellular fluid space (thiocyanide space) in dogs after total body x-ray radiation with lethal doses over 50. Kísérletes orvostud 8 no.1:34-39 1956.

1. Országos Onkológiai Intézet Sugárbiológiai Osztálya.

(ROENTGEN RAYS, eff.

total body, lethal dosage, on extracellular fluid space in dogs (Hun))

(BODY FLUIDS

extracellular space, eff. of lethal total body x-ray radiation in dogs (Hun))

FRATER, Janosne

"Erected by the nation"; the building of the Academy's palace  
started 100 years ago. Magyar tud 69 no.6/7:450-459 Je-Jl '62.

1. Magyar Tudományos Akademia Konyvtara Tudományos munkatarsa.



HUNGARY

FRATER, Lorand, Dr; X-Ray Clinic of Szeged Medical University (director:  
Prof Dr Tibor SZENES)

"A New Method of the X-Ray Measurement of Heart Volume, and Its Diagnostic Value."

Budapest, Magyar Radiologia, Vol 18, No 3, Jun 66, pp 137-141

Abstract [author's Russian, English and German summaries, modified]: By means of a correction factor and simple calculation, the volume of the heart is determined from the measured breadth diameter, the height and the maximum horizontal depth. No special instruments are necessary. The method is suitable also for series examinations. Two Soviet-bloc and seven Western refs.

1/1

VAGAS, Istvan; ERDELYI, Mihaly, dr.; ERDI, Sandor; FRATER, Lorant;  
VITALIS, Gyorgy, dr.; RONAI, Andras, dr.

Possibilities for irrigation by driven wells in Nograd County.  
Hidrologiai kozlony 44 no.6:254-260 Jo '64.

1. Editorial board member, "Hidrologiai Kozlony" (for Vagas,  
Erdelyi, Vitalis).

HUNGARY

FRATER, Mikols, Dr., SZOLLOSI, Irma, Dr., and [the late] KERENYI, Imre, Dr., Pesthidegkut Section of the Megye Tuberculosis Sanitarium at Budagyongye (Budagyongyei Megyei Tudobeteggyogyintezet) in Pesthidegkut; and Department of Surgery at the Tuberculosis Sanitarium of the Hungarian National Railways (Magyar Allamvasutak Tudobeteggyogyintezet, Sebeszeti Osztaly) [location not given].

"An Operated Arterio-Venous Shunt Treated as Epituberculosis"

Budapest, Orvosi Hetilap, Vol 107, No 26, 26 Jun 1966, pp 1234-1235.

Abstract: The case of a 23-year old female patient shown in vivo to suffer from an arterio-venous fistula, treated by operative means, has been described. This is a rare case but should be considered in instances of pulmonar diagnosis. It is necessary to employ layer X-rays and angiopneumocardiography to effect positive diagnosis. In cases of single shunt, operation is indicated since there is a danger of embolism. The authors observed degenerative lung conditions in the area of deformation. 16 references, including 6 Hungarian, 5 German, 1 Russian, and 4 Western.

SASSY-BOBRAY, Gabor, dr.; FRATER, Miklos, dr.; VARGA, László, dr.;  
DESBORDES, Emil, dr.; SZIGETI, Pál, dr.

The problem of filling and condensation of caverns. Tuberk. kerdesei  
7 no.4:49-53 Aug 54.

1. Budapest Fovaros Tancsasa Janos-korhaza (igazgato-foorvos:  
Bakacs Tibor dr. egyet. m. tanar) I. Tudosztalyanak (foorvos  
Szigeti Pal dr.) kozlemenye.

(TUBERCULOSIS, PULMONARY

cavitation, differ. diag. from tuberculoma, x-ray)

(TUBERCULOMA, differ. diag.

tuberc., pulm., x-ray)

FRATER, Miklos, dr.

Observations on the examinations of sputum and larynx-plug  
cultures of tuberculotics. Tuberk. kerdesei 9 no.3:100-106  
June 56.

1. A Budapesti Janos korhaz (igaz: Bakacs, Tibor, dr.)
- I. Tudobetegosztalyanak (osztalyos foorvos: Szigeti, Pal, dr.).  
(MYCOBACTERIUM TUBERCULOSIS, culture  
in sputum & larynx-plug, in pulm. tuberc., statist. on  
bact. incidence in various phases of dis. & in various  
ther. processes (Hun))

SZIGETI, Pal, Dr.; FRATER, Miklos, Dr.

Data on the indication and therapeutic results of pneumothorax. Tuberkulózis 11 no.3-5:88-92 Mar-May 58.

1. A Janos-korhaz Rendelointezet Budapest (igazgato-foorvos: Bakacs Tibor dr.) I. Tudosztalya) foorvos: Szigeti Pal dr.) kozlemenye.  
(PNEUMOTHORAX, ARTIFICIAL  
indic. & ther. results (Hung))

SZIGETI, Pal, dr.; FRATER, Miklos, dr.

Contributions to complication and surgical therapy of primary tuberculosis in adults. Tuberkulozis 12 no.9:210-212 S '59.

1. A Janos Korhaz Rendelo Intezet (igazgato-foorvos: Tako Jozsef dr.) I. Tudo Osztaly (vezeto foorvos: Szigeti Pal dr.) kozlomenye.

(TUBERCULOSIS PULMONARY compl)

Country : HUNGARY  
 Category : Pharmacology and Toxicology. Toxicology. Hallu-  
 cinogens V  
 Abs. Jour. : Ref Zhur-Biol, No 13, 1958, No 61573  
 Author : Iranyi, J.; Frater, R.  
 Institut. : -  
 Title : Experimental Psychoses Produced by Diethylamide  
 of Lysergic Acid (DLA)  
 Orig. Pub. : Orv. hetilap, 1957, 98, No 41, 1115-1120

Abstract : On the basis of a study of experimental psycho-  
 ses, produced by peroral administration of 10-  
 150 mcg. of DLA to 29 patients most of whom were  
 in the chronic stage of schizophrenia, as well  
 as on the basis of investigations carried out on  
 themselves, the authors concluded that there was  
 no relationship between reactions on the part of  
 the majority of the subjects and the dose of DLA,  
 both in regard to the character and the intensi-  
 ty of clinical phenomena. Intoxication with DLA

Card: 1/4

V - 113



Country : Hungary  
 Category : Pharmacology and Toxicology. Toxicology. V  
           : Hallucinogens.  
 Abs. Jour. : Ref Zhur-Biol, No 13, 1958, No 61573  
 Author :  
 Institut. :  
 Title :  
 Orig Pub. :  
 Abstract : resembles weakly marked psychotic reactions of  
           the exogenous type. During the period of intoxi-  
           cation, the following were observed: Romberg's  
           sign, tremor of the eyelashes and hands, dys-  
           arthria, muscular hypertonia, dizziness, ano-  
           rexia, paresthesia, drowsiness, etc.; among psy-  
           chic disturbances noted were disorders in per-  
           ception (illusions, hallucinations, hyperacusis,  
           olfactory disturbances, loss of sense of reali-  
           zation and personal identity), and disorders of  
 Card: 2/4

Country : Hungary  
 Category : Pharmacology and Toxicology. Toxicology. V  
           : Hallucinogens.  
 Abs. Jour. : Ref Zhur-Biol, No 13, 1958, No 61573  
 Author :  
 Institut. :  
 Title :  
 Orig Pub. :  
 Abstract : value. In a limited manner, it can be used to  
           establish temporary contact with the patient.

FRATER, Rosa; WOHLMUTH, Gertrud

Electroencephalographic studies on hypoxia induced brain injuries in the newborn infant. Acta paediat. acad. sci. hung. 3 no.2:151-157 '62.

1. Psychiatrische Klinik (Director: Prof. Dr. J. Nyiro) der Medizinischen Universität, Budapest, und Stadtisches "Schopf-Merei Agoston" Frühgeborenen-Spital, (Direktor: Dr. K. Gergely) Budapest.

(ELECTROENCEPHALOGRAPHY)	(CEREBRAL ANOXIA)
(ASPHYXIA NEONATORUM)	(BRAIN DAMAGE, CHRONIC)
(JAUNDICE NEONATAL)	(PNEUMONIA, INTERSTITIAL PLASMA CELL)
	(CEREBRAL HEMORRHAGE)

WOHLMUTH, Gertrud; FRATER, Rosa

Catamnestic neurological studies in icterus gravis. Acta paediat.  
acad. sci. Hung. 2 no.3:173-177 '61.

1. Stadtisches "Schopf-Merei Agoston" Fruhgeborenenspital, Budapest  
(Direktor: Dr. K. Gergely) und Psychiatrische Klinik (Direktor: Prof.  
Dr. J. Nyiro) der Medizinischen Universitat Budapest.

(ERYTHROBLASTOSIS FETAL physiol)  
(NEUROLOGY in inf & child)  
(ELECTROENCEPHALOGRAPHY in inf & child)

FRATER, Rozsa, dr.; WOHLMUTH, Gertrud, dr.

EEG examination of children with severe forms of icterus gravis neonatorum. Gyermekgyógyászat 12 no.11:321-327 N '61.

1. A Budapesti Orvostudományi Egyetem Pszichiatriai klinikájának (Igazgató: Nyíró Gyula dr.) és a Budapest Városi Tanács Schopf-Merei Agoston kórháza (Igazgató: Gergely Karoly dr.) Salgotarjani úti koraszülött osztályának (Főorvos: Wohlmuth Gertrud dr.) közleménye.

(ERTHROBLASTOSIS FETAL diag)

(ELECTROENCEPHALOGRAPHY in inf & child)

FRATER, Rose; WOHLMUTH, Gertrud

Electroencephalographic studies in prematures and newborns. Acta Paediat Acad Sci Hung 1 no.4:279-287 '60.

1. Department of Psychiatry, University Medical School, Budapest, and Schopf-Merei Hospital for Premature Babies, Budapest.

(ELECTROENCEPHALOGRAPHY in inf & child)  
(INFANT PREMATURE physiol)  
(INFANT NEWBORN physiol)

FRATER, Rozsa, dr.; WOHLMUTH, Gertrud, dr.

Data on the electroencephalographic examination of premature and newborn infants. *Gyermekegygyaszat* 12 no.2:33-41 F '61.

1. A budapesti Pszichiatriai klinika (igazgato: dr. Nyiro Gyula)  
es a Schopf-Merei Agoston korhaz (igazgato: dr. Gergely Karoly)  
Salgotarjani uti osztalyanak (foorvos: dr. Wohlmuth Gertrud)  
kozlemenye,

(INFANT NEWBORN physiol)

(INFANT PREMATURE physiol)

(ELECTROENCEPHALOGRAPHY in inf & child)

FERNADI, Ferenc, dr.; FRATER, Rozsa, dr.; SZEGEDY, Laszlo, dr.

Epilepsy provoked by television. Orv. hetil. 105 no.42:1980-  
1982 0 18 '64.

1. Budapesti Orvostudományi Egyetem, Psychiatrical Klinika  
(igazgató: Nyíró Gyula dr.).

WONLATH, Cortrud; FEATER, Rozsa

Late sequelae of prematurity. Acta paediat. acad. sci. Hung.  
6 no.3/4:292-302 '65.

Electroencephalographic examination of prematurely born  
school-age children. Ibid.:305-311

1. Department of Premature Infants of the Schöpf-Morel Hospital,  
and Department of Psychiatry, University Medical School, Budapest.  
Submitted January 11, 1965.



DENT'ROV, B.; FRATEV, F.

Electron absorption spectra in the colored complexes of  
aromatic compounds with  $\text{NaNO}_2$  and concentrated  $\text{H}_2\text{SO}_4$ .  
Dokl. Akad. Nauk SSSR 247 no. 1:1-19 '62 [publ. '63].

DIMITROV, D.; FRATEV, F.

Certain laws governing electronic absorption spectra of colour solutions obtained from aromatic compounds with sodium nitrite and concentrated sulfuric acid. Doklady BAN 16 no.7:729-732 '63.

1. Submitted by Corresponding Member B.Kourtev [Kurtev, B.]

ACC NR: AP6032576

SOURCE CODE: BU/0011/65/018/012/1137/1139

AUTHOR: Tyutyulkov, N.; Fratev, F.

ORG: Institute of Organic Chemistry, BAN

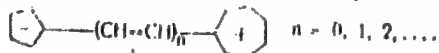
62  
B

TITLE: Calculating the alpha-cyclopropenyl-omega-cyclopentadienyl-polyenes using the LCAO-MO theory of molecular orbitals

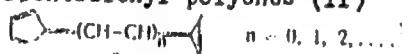
SOURCE: Bulgarska akademiya na naukite. Doklady, v. 18, no. 12, 1965, 1137-1139

TOPIC TAGS: molecular orbital, charge density, chemical bonding, computer, computer program, molecular structure, organic chemistry/Minsk-2 computer

ABSTRACT: In an earlier communication (Dokl. BAN, 18, 1965, No 11) an examination was made of the  $\alpha$ -cyclopentadienyl- $\omega$ -cycloheptatrienyl-polyenes using the theory of molecular orbitals in the conventional variant of Hückel (Z. Phys. 70, 1931, 204). It was demonstrated that the distribution of the  $\pi$ -electronic charge and the alternation in the bond order is such that the structure of the compounds (I) is



The present paper is to investigate the compounds of the group of  $\alpha$ -cyclopropenyl- $\omega$ -cyclopentadienyl-polyenes (II)



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S 47862-55

ACC NR: AP6032576

in order to see the degree to which the typical and interesting distribution of the charges of the compounds of order (I) is preserved in this instance as well. The electronic charge of the atom and the bond order were calculated on the Minsk-2 computer using the Hueckel's method program. Results are shown on structural diagrams and in a table. This paper was presented by Corresponding Member BAN B. Kourtev on 7 September 1965. Orig. art. has: 4 figures and 1 table. [Orig. art. in Eng.] [JPRS: 36,464]

SUB CODE: 07 / SUBM DATE: none / ORIG REF: 001 / SOV REF: 001  
OTH REF: 001

Card 2/2 *lge*

RUMANIA / General and Special Zoology. Insects.  
Insect and Mite Pests.

P

Abs Jour: Ref Zhur-Biol., No 12, 1958, 54361.

Author : Arsenescu, M.; Fratian, Al.; Gruescu, A.; Stefan-  
escu, M.; Valaczkai, Fr.

Inst : Not given.

Title : Aero-Chemical Control of Caterpillars of Lymantria  
[Porthetria] dispar in the Forests of the Green  
Zone of the City of Bucharest in the Spring of 1956.

Orig Pub: Rev. padurilor, 1957, 71, No 4, 244-250, 215, 216,  
289, 290.

Abstract: Aerial treatment, chiefly with different DDT pre-  
parations, was employed against the gypsy moth  
caterpillars which were widespread in the woods  
and in the parks near Bucharest in 1956. The best  
results (99-100% destruction of the caterpillars

Card 1/2

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PHASE I BOOK EXPLOITATION

RUM/3788

Cluj, Transylvania. Institutul Politehnic

Lucrări științifice (Scientific Works) Cluj, Intreprinderea Poligrafica, 1959.  
637 p. Errata slip inserted. No. of copies printed not given. No contributors mentioned.

PURPOSE: This book is intended for mathematicians, physicists, chemists, and civil and mechanical engineers.

COVERAGE: The book consists of 59 papers by Rumanian specialists on problems in science and technology, particularly mathematics, physics, chemistry, metallurgy, civil and mechanical engineering. Summaries in Russian and French or German are given at the end of each article. Some of the articles are accompanied by references. No personalities are mentioned. At the back of the book there are 23 references, all Rumanian.

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Card 2/11

GOIA, I., Prof.; GLIGORE, V., conf.; DIMITRESCU, I., dr.; ~~FISCHER~~, G., dr.;  
FLORESCU, I., dr.; GHERMAN, Gr., dr.; FRATILA, I., dr.

Therapy of ulcerous diseases. Med. int., Bucur. 8 no.4:518-  
525 Aug 56.

1. Lucrare din Clinica a II-a medicala I.M.F. - Cluj.

(PEPTIC ULCER, therapy

gastric lavage with hypertonic glucose solutions,  
evaluation)

(HYPERTONIC SOLUTIONS, ther. use

glucose solutions in gastric lavage for peptic ulcer)



GAVRILA, I., prof.; COMES, L., conf.; PIRVU, C., dr.; URCAN, S., dr.; FRATILA, O., dr.,  
BOTA, R., chimist

Investigations of amylase in the blood and urine in epidemic  
parotitis. Med. int., Bucur. 12 no.1:15-22 Ja '60.

1. Lucrare efectuata in Clinica de boli contagioase, Cluj,  
director prof. I. Gavrilă.

(AMYLASES, metabolism)

(PAROTITIS, metabolism)

FODOR, O., prof.; STANESCU, L., dr.; COSMA, V., dr.; ITU, I., dr.; FRATILA, I.,  
dr.; MUNTEANU, P., dr.; SCHWARTZ, M., dr.; CIOFU, Gh., dr.; ILEA, V.,  
dr.; COTUL, S., dr.; DUMITRASCU, D., dr.; BORSAN, I., laborant

Clinical and epidemiological research on the evolution toward  
chronicity of acute epidemic hepatitis. Med. intern. (Bucur.)  
16 no.12:1505-1510 D '64

1. Lucrare efectuata in Clinica a III-a medicala, Institutul  
medico-farmaceutic, Cluj.

CATEGORY : GENERAL & SPEC. ZOOLOGY, INSECTS • Harmful insects  
and Mites.

ABS. JOUR : Ref Zhur - Biologiya, No. 2, 1959, No. 7055

AUTHOR : Frutkin, A.B.

LIST : Not given

TITLE : *Hadena basilinea* - a Dangerous Pest.

ORIG. PUB.: Zashchita rast. ot vredit. i bolezney, 1957,  
No. 6, 54

ABSTRACT : The large-scale reproduction of *Hadena*  
*basilinea* in Northern Kazakhstan and adjacent  
regions of RSFSR is treated. Disruptions in  
the agrotechnics are shown as causes of the  
mass reproduction. Agrotechnical and chemical  
means of control are recommended for saving  
grain crops and controlling the spread of  
*Hadena basilinea*.

FRATKIN, A.B., agronom-entomolog

Scientific session on cotton growing in Tashkent. Zashch. rast. ot  
vred. i bol. 3 no.1:59 Ja-F '58. (MIRA 11:3)  
(Cotton growing)

FRATKIN, A.B., agronom-entomolog

Enemy of tree plantations. Nauka i zhizn' 25 no.5:79 My '58.  
(Gypsy moth) (MIRA 11:5)

FRATKIN, A.B.

Questions and answers. Zashch. rast. ot vrod. i bol. 6 no.5:35-36  
My '61. (MIRA 15:6)  
(Herbicides)

FRATKIN, A.B., agronom-entomolog

The cutworm *Hadena basilinea* as a dangerous pest. Zashch. rast.  
ot vred. i bol. 2 no.6:54 N-D '57. (MIRA 16:1)  
(Kazakhstan--Cutworms)  
(Kazakhstan--Grain--Diseases and pests)

FRATKIN, A.B.

Some problems in the chemical protection of plants in the seven-year plan. Zashch.rast.qt vred. i bol.4 no.4:18-20 JI-Ag '59.

(MIRA 16:5)

—(Plants, Protection of)

(Agricultural chemicals)



FRATKIN, A. B.

Discussions on herbicides in the Scientific Technological  
Council of the Ministry of Agriculture of the U.S.S.S.  
Zashch. rast. ot vred. i bol. 5 no.6:58 Ja '60.  
(MIRA 16:1)

(Herbicides)

FRATKIN, A.B.

Foreign pesticides. Zashch. rast. ot vred. i bol. 8 no.3:  
38-39 Mr '63. (MIRA 17:1)

FRATKIN, A.B., agronom-entomolog

Sucking pests of pulse crops. Zashch. rast. ot vred. 1 bol.  
8 no.4:33-34 Ap '63. (MIRA 16:10)

(Legumes—Diseases and pests)  
(Insects, Injurious and beneficial—Control)

FRATKIN, A.B.

Poisonous chemicals for collective orchards and farmers' personal  
plots. Zashch. rast. ot vred. i bol. 8 no.9:38 S '63.  
(MIRA 16:10)

FRATKIN, A.B., agronom

Review of a book on defoliants and desiccants. Zashch. rast. ot  
vred. i bol. 8 no.11:61 N '63. (MIRA 17:3)

FRATKIN, A.B., agronom-entomolog

Poisonous chemicals for collective farm orchards and personal  
plots. Zashch. rast. ot vred. i bol. 9 no.1:40 '64. (MIRA 17:4)

FRATKIN, A.B.

Poisonous chemicals for collective farm orchards and farmers'  
personal plots (continuation). Zashch. rast. ot vred. i bol. 9  
no.3:38 '64. (MIRA 17:4)

FRATKIN, A.B., agronom po zashchite rasteniy

Poisonous chemicals for collective-farm orchards and the farmers'  
personal plots. Zashch. rast. ot vred. i bol. 9 no. 4:38 '64.  
(MIRA 17:5)



FRATKIN, A.B., agronomist for the U.S. Army

toisomerase chemicals for the U.S. Army and for the  
plots. Washed. rust. of seed. 1 lb. 10/10/51

FRATKIN, A.M.

Instrument for measuring the coefficient of linear expansion of solids. Politekh. obuch. no.8:54-57 Ag '59.

(MIRA 12:10)

1.Shkola No.72, Leningrad.

(Measuring instruments)

KORBOV, Meyer Moiseyevich; PRATKIN, Boris Abramovich

[Let's lower production costs] Snizhaem sebestoimost' produktsii.  
Moskva, Profizdat, 1958. 32 p. (MIRA 13:4)  
(Costs, Industrial)

*FRATKIN, O.S.*

3-58-6-15/14

AUTHOR: Fratkin, O.S.

TITLE: What Kind of Films Do the Vuzes Need? (Kakiye fil'my nuzhny vuzam)

PERIODICAL: Vestnik Vysshey Shkoly, 1958, Nr 6, p 66-69 (USSR)

ABSTRACT: So far, not only the distant higher educational institutions, but even the Moskovskiy universitet (Moscow University) manages to do without instructional and scientific motion pictures. The main reason for it is a lack of films. The importance of a training film is illustrated by the example of a motion picture on the "Brownian Movement". When no film is used, the process of movement and development can only be observed by a limited number of people or cannot be seen at all by direct observation. In many cases it will suffice to show only the individual phenomena without connecting them with the subject as a whole. At the beginning of this year, the Chair of Scientific and Instructional Cinematography of the MGU requested the university's mechanical-mathematical and chemical faculties to produce training films for the courses on computing devices and for ultramicrochemical analysis. The author further recommends that films be produced showing prominent USSR scientists delivering lectures. At the Moscow

Card 1/2

What Kind of Films Do the Vuzes Need?

3-58-6-15/34

University, for example, the lectures of Academician P.A. Rebinder (Chair of Colloidal Chemistry), of Professor, Member-Correspondent of the USSR AS, V.I. Spitsyn (Chair of Inorganic Chemistry), and of Professor I.F. Kopyl (Economic Faculty) are much favored by the students.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova  
(Moscow State University imeni M.V. Lomonosov)

Card 2/2

17

CP

PROCESSES AND PROPERTIES INDEX

Dry distillation of Nicotiana roots and of its waste products in a rotating Fischer retort. R. L. Fraikin and S. A. Neklitsch. *Tobacco Science* 1966:166:1, 43-5.

—Dry distn. of small leaves and dust of N. roots in a rotating Fischer retort up to 470°, yielded up to 80% of the nicotine present. Tar from the leaves was 5-6% and from the dust 3.5%. The yield of nicotine was higher from the dust, because of the absence of crust formation through heating. The fractions b. 200-320° contained paraffin wax m. 53-4°. The semicoke contained 3.5% of substances extractable with  $C_6H_6$  +  $C_2H_5OH$  and 2.6% N. Detailed analysis of the products obtained is given. A. A. Borshinov

ASM-51A METALLURGICAL LITERATURE CLASSIFICATION

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131 AND 132 (1978)		140 AND 141 (1978)									
PROCESS AND PROPERTIES INDEX											
BC		C-11-2									
<p>Indirect method for rapid determination of nicotine in fresh Manzanillo and cigar-tobacco leaves. R. L. FARMER and D. A. BORRIS (Shorn. Robot Chem. Gazeta, 1955, 7-35). The val. of <math>n_D^{20}</math> of the expressed juice of Manzanillo leaves and of cigar-tobacco leaves increases with the nicotine (N) content from 1.388-1.341 for up to 1% to 1.340-1.348 for 10-12 % of (N). For field tests the sugar refractometer is recommended. The change in <math>n_D^{20}</math> produced by heating the juice to 80° gives some indication of the degree of maturity of the plant. T. H. P.</p>											
ASB-51A DETAILING LITERATURE CLASSIFICATION											
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PROCESSES AND PROPERTIES INDEX

Influence of the products of hydrogenation from the waste of *Nicotiana rustica* and the nicotine manufacture on the crop of *Nicotiana rustica*. P. A. Gliko, R. L. Frutkin and M. Ya. Yakovenko. *Tabachnaya Prom.* 1935, No. 1, 29-32.—The *Nicotiana rustica* dust which accumulates in great amounts during the treatment of the tobacco is a good fertilizer; it contains  $H_2O$  7.5, nicotine 0.8-1.7, N 2.0,  $H_3PO_4$  0.66, KOH 3.32, ash (pure) 16, sand 40,  $SiO_2$  1.00, CO 1.17,  $SO_2$  0.50, S 0.03, Cl 0.53, CaO 5.74,  $MgO$  0.92,  $Mn_2O_3$  0.06,  $Al_2O_3$  0.37,  $Fe_2O_3$  1.20 and NaO 0.18%. The *Nicotiana rustica* dust and its distillate were hydrogenated under high pressure and in the presence of catalysts, yielding liquid hydrocarbons, bases and a tar water. The content of aromatic hydrocarbons in the hydrogenated fractions increases with the b. p. while that of said. hydrocarbons decreases. Various fractions of the hydrogenation products were tried as fertilizers; the tar water and the fraction b. 250-300° had the best effect. A. A. Bochtlingk

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION



137 AND 138 (2-19)		140 AND 141 (2-19)	
PROCESSING AND PROPERTY INDEX			
<div style="position: absolute; top: 10%; left: 10%; font-size: 2em; font-weight: bold;">BC</div>		<div style="position: absolute; top: 10%; right: 10%; font-size: 1.5em;">a-3</div>	
<p><b>Determination of pyridine in presence of nicotine.</b> R. L. FRANK, L. P. JURAVLEVA, and A. G. BLANKENHORN (Soviet Robot. Chim. Otdel., 1935, 68-106).—The C<sub>10</sub>H<sub>9</sub>N is distilled off in presence of excess of AcOH. The residue is made alkaline and the nicotine distilled in steam and determined as nicotinate. The acid C<sub>10</sub>H<sub>9</sub>N distillate is made alkaline, redistilled into dil. H<sub>2</sub>SO<sub>4</sub>, pptd. with NH<sub>4</sub>OH and CuSO<sub>4</sub>, and the solution titrated with standard AgNO<sub>3</sub>. The method is more accurate than that of Mack and Rindlinger (A., 1924, ii, 357).</p> <p style="text-align: right;">T. H. P.</p>			
45B-51A METALLURGICAL LITERATURE CLASSIFICATION			
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Hydrogenation of "mahherka" [Nisotoma resin tobacco] dust and resin. I. A. Tyrfil'ev, R. L. Fratin and K. A. Benkman. *Sborn. Rabot Khim. Otdel* 1938, 126-46.—When hydrogenated in presence of various catalysts (FeO<sub>3</sub>; Mn ore), *N. resin*, its scrap or its resin yields highly toxic liquid products; the optimum conditions for obtaining these are given. When the products thus obtained from the resin are fractionally distd., the content of aromatic and naphthenic hydrocarbons in the fractions increases, and that of olefins and paraffins decreases, as distn. proceeds. B. C. A.

ASR-51A METALLURGICAL LITERATURE CLASSIFICATION

PHASE I BOOK EXPLOITATION SOV/3698

Fratkin, Ruvym L'vovich, Candidate of Chemical Sciences

Povitrya yak khimichna syrovyna (Air as a Chemical Raw Material)  
Kyiv, 1959. 31 p. (Series: Tovarystvo dlya poshyrennya  
politychnykh i naukovykh znan'Ukrayins'koyi RSR, Ser. 7, No. 7)  
9,500 copies printed.

General Ed.: F.F. Hryhorenko, Candidate of Chemical Sciences; Ed. of  
Publishing House: M.V. Tuboleva.

**PURPOSE:** This booklet is intended for persons interested in the  
utilization of atmospheric air as a raw material in the chem-  
ical industry.

**COVERAGE:** This booklet is a popular treatment of the applications  
of the gaseous components of air, particularly nitrogen.  
The author points out that the production of krypton and xenon  
in the Ukrainian SSR has been limited due to a lag in the develop-  
ment of this branch of industry there. No personalities

Card 1/2

Air as a Chemical Material

SOV/3698

are mentioned. There are no references.

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AVAILABLE: Library of Congress

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TM/gmp  
6-9-60

FRAYMAN, R.S.; GEL'PERIN, E.N.; LUZANOVA, T.I.

Gas-distributing units with conjugate cones for the apparatus with  
a fluid bed. Khim.i tekhn.topl.i masel 8 no.8:44-46 Ag '63.  
(MIRA 16:9)

(Gas distribution) (Fluidization)

FRATKIN, A.B., agronom po zashchite rasteniy

Some foreign pesticides. Zashch. rast. ot vred. i bol. 9  
no.5:55 '64. (MIRA 17:6)

Spectral Analysis by Dr. Harold L. ...  
R. J. ...

...  
...  
...

ZAYDEL', A.N.; KALITEYEVSKIY, N.I.; KUND, G.G.; FRATKIN, Z.G.

Function of carriers in the spectrum analysis of materials of  
low volatility. Fiz.sbor. no.4:29-30 '58. (MIRA 12:5)

1. Fizicheskiy institut Leningradskogo ordena Lenina gosudar-  
stvennogo universiteta imeni A.A.Zhdanova.  
(Uranium compounds--Spectra)



IDENTIFICATION 70

PLAS I BOX EXPLOSION 304/3313

Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh reaktivov  
Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh reaktivov  
and Reagents: Collection of Articles; Moscow, Goskhimizdat, 1959.  
186 p. (Series: Issledovaniya, v. 23) Errata slip inserted. 1,700  
copies printed.

Sponsoring Agency: USSR, Soviet Ministry. Goskhimizdatnyi knizhnyy po khimii.

Ed.: Yu.V. Lyubskiy; Tech. Ed.: Ye.I. Spits; Editorial Board of Series:  
V.G. Brudskiy, V.M. Brikovskiy, R.P. Gostovskiy (Serp. Ed.), A.M. Galin,  
G.F. Mal'kov, G.I. Mikhaylov, G.A. Pervov (Serp. Resp. Ed.), and  
I.G. Shafrenko.

PURPOSE: This book is intended for personnel of chemical research and industrial  
chemical laboratories.

CONTENTS: The book contains 36 articles by affiliates of the Scientific Research  
Institute for Chemical Reagents (IIRA) treating methods which may be adopted  
by different branches of industry in producing, analyzing, and studying inor-  
ganic and organic substances of high purity. Figures, tables, and references  
accompany each article. No personalities are mentioned.

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Shupin, Ye. A., and I.M. Fokhtikhin. Determination of the Elementary  
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27. SYSTEMS

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Ten Years

AVAILABLE: Library of Congress

Card 6/6

34/m/000

FRATKIN, Z.G.

Relation between the sensitivity of the determinations and the  
parameters of a spectrograph. Zav.lab 26 no.8:971-973 '60.  
(MIRA 13:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh  
reaktivov.  
(Spectrograph)

S/032/60/026/012/012/036  
B020/B056

AUTHORS: Fratkin, Z. G. and Andreyeva, I. Yu.  
TITLE: The Spectroscopic Analysis of Impurities in High-purity Sulfur  
PERIODICAL: Zavodskaya laboratoriya, 1960, Vol. 26, No. 12, pp. 1370-1371

TEXT: Two methods of determining the purity of high-purity sulfur by means of spectrum analysis were worked out, namely the direct spectroscopic determination and the determination with previous enrichment of the sample. Work in this field was carried out by A. N. Bronshteyn and L. M. Ivantsov (Ref. 1). In the case of the first method, the standards were prepared in such a manner that the elements Fe, Co, Cu, Ag to be determined were mixed, as sulfides together with sulfur into a jasper- or agate mortar, and aluminum was introduced as  $Al_2O_3$ . The spectra were recorded by means of the spectrograph ИСП-28 (ISP-28). An exciter, an a.c. arc with an amperage of 7 a was used. The sample was pressed into the channel of the lower carbon electrode, whose diameter was 3 mm and whose depth was 4 mm. The upper  
Card 1/4

The Spectroscopic Analysis of Impurities  
in High-purity Sulfur

S/032/60/026/012/012/036  
B020/B056


electrode had the shape of a truncated cone. The electrode spacing was 3 mm. 5% of NaCl was added to all standards and samples. The effect produced by NaCl on the intensity of the spectral lines of the elements determined may be seen from the data given in Table 1. The method is based upon the use of three standards. As inner standard in the determination of Al, Ni, Co, Cu, and Ag, a closed background was used. Iron is determined on the basis of the "absolute" blackenings of the analytical bands. The analytical bands and the range of the determined concentrations are given in Table 2. The mean square error of the single determination of various elements is 9-18%, in the case of nickel and cobalt at concentrations of below 0.001% 30-35%. In the determination of Cu, Ag, In, Ga, Ni, and Co with previous concentration of the sample, a mixture of spectrally pure silicon dioxide (80%) and NaCl (20%) was used as collector. 12 mg weighed portion of the collector is mixed for 20 minutes in a quartz mortar with 600 mg of the analyzed sample, after which the sulfur is burned. For the purpose of removing the organic substances, the residue is heated for 30 minutes to 500° in the muffle furnace. When concentrating the impurities it was found by spectroscopy that they do not go over into

Card 2/4

The Spectroscopic Analysis of Impurities  
in High-purity Sulfur

S/032/60/026/012/012/036  
B020/B056

the collector quantitatively. The standards were prepared in the same manner as in the preceding case. All impurities, with the exception of Ga, were introduced in form of sulfides, Ga as sulfate. The sulfur used as a basic material contained no Ag, In, Ga, Ni, and Co. Its copper content was determined by means of the successive approximation technique. The analysis was carried out according to a calibration diagram, which had been recorded in the coordinates  $[\Delta S; \log C]$ . In Table 3, the analytical lines and the ranges of the determination concentration of the elements investigated were enumerated according to the second method. In the second column of the table, also the transmissivity of the various spectral regions is given. The mean square error of a single determination is for Cu 30%, for Ag 11%, indium 12%, Ga 23%, nickel 28%, and Co 24%. The analysis conditions mentioned also permit the determination of lead and tin with an accuracy of  $3 \cdot 10^{-5}\%$  and of magnesium with an accuracy of  $1 \cdot 10^{-5}\%$ . There are 3 tables and 3 Soviet references.



Card 3/4

The Spectroscopic Analysis of Impurities  
in High-purity Sulfur

S/032/60/026/012/012/036  
B020/B056

ASSOCIATION: Leningradskaya laboratoriya Vsesoyuznogo nauchno-issledo-  
vatel'skogo instituta khimicheskikh reaktivov  
(Leningrad Laboratory of the All-Union Scientific Research  
Institute of Chemical Reagents)

Card 4/4

S/032/026/012/014/036  
B020/B036

AUTHORS: Fratkin, Z. G. and Polivanov, N. G.  
TITLE: Determination of Trace Impurities in Selenium  
PERIODICAL: Zavodskaya laboratoriya, 1960, Vol. 26, No. 12,  
pp. 1372-1374

TEXT: In a paper by O. G. Koch (Ref. 1) a method for the spectroscopic determination of impurities in selenium with preceding chemical enrichment is described which is, however, too complicated for serial analysis. In the present paper a simple analytical method for pure selenium in a standard equipment is described, which permits determination of impurities with a higher accuracy than in the paper by G. E. Peterson and E. W. Carrier (Ref. 2). The conditions of the analysis are given in Table 1. The impurities were determined according to the three-standards-technique. Table 2 shows when the background near the analytical lines was used as inner standard. In all other cases, determination was carried out according to the "absolute" blackenings. The spectra of the samples and standards were photographed three times in each case on the same plate. The mean square

Card 1/2

Determination of Trace Impurities in Selenium S/032/60/026/012/014/036  
B020/B056

error of the method for various impurities is 20 to 25%. The error of analysis is reduced by the introduction of carbon powder into samples with an impurity content that is three to five times higher than the lower limit of detection. In the semiquantitative analysis, the lower limit of detection may be largely reduced. The standards were produced from pulverulent selenium, the impurities being introduced in form of selenides or sulfides and tellurium in form of powder. The initial standards contained 10% of the impurities to be determined. Standards with lower concentration were obtained by successive dilution with pulverulent pure selenium by means of a mechanical mixer. There are 2 tables and 3 references: 1 Soviet, 1 Austrian, and 1 US.

ASSOCIATION: Leningradskaya laboratoriya Vsesoyuznogo nauchno-issledovatel'skogo instituta khimicheskikh reaktivov  
(Leningrad Laboratory of the All-Union Scientific Research Institute of Chemical Reagents)

Card 2/2



FRATKIN, Z.G.; VOLOKHOVA, M.I.; POLIVANOVA, N.G.

Spectral analysis of high purity iodine.      Zav.lab. 27  
no.7:846-848 '61.      (MIRA 14:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh  
reaktivov.

(Iodine--Spectra)

NR 4T5012675

Tratkin, Z. G., Shebunina, V. S.

**TITLE:** Concentration of metal impurities in the spectrochemical analysis of substances forming volatile fluorides <sup>21</sup>

**SOURCE:** AN SSSR. Komissiya po analiticheskoy khimii. Trudy, v. 15, 1965. Metody kontsentrirvaniya veshchestv v analiticheskoy khimii (Methods of concentrating substances in analytical chemistry), 127-131

**TOPIC TAGS:** spectrochemical analysis, impurity concentration, volatile fluoride, titanium dioxide analysis, fluoride vaporization

**ABSTRACT:** A method of concentrating impurities is proposed which is based on the increasing the volatility of the fluorides.

L 52277-65

ACCESSION NR: AT5012675

given for the extent of concentration of impurities consisting of elements which do not form volatile fluorides are which were introduced into synthetic samples of titanium  
K, Na, Ca, Mg, Al, Fe, Cu, Mn, Ni, Sn, Pb and Cr. It was shown that  
of the analyte, these elements were concentrated.

The art has: 1 figure and 3 tables.

ANALYTICAL  
AN SS SR.

END

OTHER

L 1471-66 EWT(m)/ENP(t)/ENP(b) IJP(c) JD/JG

ACCESSION NR: AP5022170

UR/0032/65/031/009/1090/1091

AUTHOR: Fratkin, Z. G.; Moshkovich, G. N.; Filippova, Zh. A.

TITLE: Determination of sodium and potassium in titanium dioxide by flame photometry

SOURCE: Zavodskaya laboratoriya, v. 31, no. 9, 1965, 1090-1091

TOPIC TAGS: sodium, potassium, titanium dioxide, flame photometry, quantitative analysis, photometric analysis

ABSTRACT: In the method proposed to determine alkali elements in titanium dioxide, the latter is reacted with gaseous hydrogen fluoride at 400C, and the volatile titanium tetrafluoride formed is driven off. Sodium and potassium are left over and are determined in solution with model III Zeiss flame photometer with an interference light filter, the spectrum being excited with an air-acetylene flame. Aqueous solutions of sodium and potassium chloride serve as the standards. Titanium impurities do not interfere with the analysis. The sensitivity of the determination is  $2 \times 10^{-4}\%$ , and the mean-square-error of a single determination is 10%. Orig. art. has: 1 table.

Card 1/2

L 1471-66  
ACCESSION NR: AP5022170

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut galurgii (All-Union  
Scientific Research Institute of Metallurgy)

SUBMITTED: 00

ENCL: 00

SUB CODE: MM, GC

NO REF SOV: 002

OTHER: 001

Card 2/2

7(6), 15(9)

AUTHOR:

Fratkina, G. P.

SOV/32-24-11-18/37

TITLE:

Quantitative Determination of Aluminum and Titanium in Low-Pressure Polyethylenes by the Method of Spectral Analysis  
(Kolichestvennoye opredeleniye alyuminiya i titana v poli-etilene nizkogo davleniya metodom spektral'nogo analiza)

PERIODICAL:

Zavodskaya Laboratoriya, 1958, Vol 24, Nr 11, pp 1373-1374  
(USSR)

ABSTRACT:

D. K. Stepanova took part in this paper. This method was developed for controlling the washing-out of catalysts (titanium tetrachloride, triethyl aluminum) from polyethylenes. As usual in the emission spectral analysis of organic compounds (Refs 3,4) the sample was ashed and mixed with a buffer (copper oxide) and powdered carbon. Standards with the following percent concentrations of aluminum and titanium were prepared: 0.5, 0.3, 0.2, 0.1, 0.06 and 0.03%. The spectra were excited by an alternating-current luminous arc (generator AG-1), and determined on a ISP-22 spectrograph. As analytical lines the Al I 2660.39 Å and Ti I 2646.64 Å were used and the line of Cu I 2627.36 Å was used as the inner standard. The standard

Card 1/2

SOV/32-24-11-18/37

Quantitative Determination of Aluminum and Titanium in Low-Pressure Polyethylenes by the Method of Spectral Analysis

plot with coordinates  $\Delta S$  (change in the density of the analytical lines) and  $\lg C$  (concentration of the Al and Ti in the corresponding standards) represents a linear function between these two quantities, with a slope of about  $45^\circ$ . The mean deviation was 5.5% in the aluminum determination and 7.3% in the titanium determination.

There are 4 references, 1 of which is Soviet.

ASSOCIATION: Leningradskiy nauchno-issledovatel'skiy institut polimerizatsionnykh plastmass (Leningrad Scientific Research Institute for Polymerized Plastics)

Card 2/2

F R A T K I N A, G. P.

LENINGRAD, UNIVERSITY NOV/5151

LENINGRAD, UNIVERSITY

Molekulynaya spektroskopiya (Molecular Spectroscopy) [Leningrad] Izd-vo Leningr. univ., 1960. 190 p. 4,700 copies printed.

Red. M. I. G. Z. Mal'kov; M. I. G. Z. Mal'kov and V. N. Zaslavskiy; Tech. Ed.: S. D. Vokologina.

FOREWORD: This collection of articles is intended for scientific workers, instructors and students of physics and chemistry. It may also be used by engineers and technicians employing molecular spectroscopy.

CONTENTS: The collection of articles describes spectroscopic studies of liquids and solutions, and includes data on applied molecular spectroscopy. Individual articles deal with the molecular interaction in solutions, and specifically with the hydrogen bond problem. Works on the optical utilization of spectral apparatus and on the analytical application of molecular spectroscopy are also included.

Aspects of the structure of high and low molecular compounds and of molecular complexes are also covered. The collection was published in honor of the 70th birthday of Professor Vladimir Mikhailevich Chelakovskiy, Soviet specialist in molecular spectroscopy and spectral analysis. There are no references.

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KIRILLOVA, E.I.; MATVEYEVA, Ye.N.; ZAVITAYEVA, L.D.; FRATKINA, G.P.;  
OBOL'YANINOVA, N.A.

Aging of polysterene plastics; thermal aging of styrene copolymers  
with acrylonitrile. Plast.massy no.8:3-10 '62. (MIRA 15:7)  
(Styrene polymers) (Plastics)

S/048/62/026/010/013/013  
B117/B186

AUTHORS:

Chulanovskiy, V. M., Gol'denberg, A. L., Pirozhnaya, L. M.,  
Popova, G. S., Tarutina, L. I., and Pratkina, G. P.

TITLE:

Spectral examination of the aging processes of polymers

PERIODICAL:

Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya,  
v. 26, no. 10, 1962, 1316-1317

TEXT: Infrared spectroscopy was examined for its applicability to investigating the aging and stabilization of polymers (e.g., high-density and low-density polyethylene, ethylene - propylene copolymer, fluorine polymers, PVC, polyvinyl alcohol and its acetals, copolymers on the basis of styrene). Conclusions: For the purpose of investigating the oxidation of polymers, infrared spectroscopy is more suitable than chemical analysis as it can be used to determine carbonyl groups in various types of compounds (e.g., in acids, aldehydes, ketones, and ether compounds), to establish the point of saturation of OH and CO groups, to observe the decomposition of the main groups, and to analyze the products of decomposition. Results of work in this field will be published later.

Card 1/1

S/191/62/000/011/001/019  
B101/B186

AUTHORS: Kirillova, E. I., Matveyeva, Ye. N., Leytman, K. A.,  
Fratkina, G. P.

TITLE: Aging of polystyrene materials. Photoaging of styrene -  
acrylonitrile copolymer, and its stabilization against  
ultraviolet radiation

PERIODICAL: Plasticheskiye massy, no. 11, 1962, 3-6

TEXT: Films of polystyrene (PS) and of its copolymers CH-10 (SN-10) and  
CH-28 (SN-28) containing 10 and 28% polyacrylonitrile, respectively,  
were irradiated with ultraviolet light from a mercury lamp  
( $\lambda = 2483-5770 \text{ \AA}$ ;  $Q = 0.0152 \text{ cal/cm}^2\text{-min}$ ) at  $25-30^\circ\text{C}$ . The film thickness  
was  $50-100 \mu$ , the molecular weight  $118,000-194,000$ , the time of irradiation  
about 400 hrs. The amount of the resulting insoluble fraction and  
the intrinsic viscosity  $[\eta]$  of the soluble fraction were determined.  
Results: (1) The amount of insoluble fraction rose with increasing  
acrylonitrile content, and even more so after reprecipitation.  
(2) Molecular weight and  $[\eta]$  dropped rapidly within the first 50 hrs, and  
Card 1/3

Aging of polystyrene materials. ...

S/191/62/000/011/001/019  
B101/B186

approached a constant value after 200 hrs. The content of acrylonitrile did not affect the course of these curves. Samples of high molecular weight were destroyed faster than samples of low molecular weight.

(3) After 400 hrs irradiation, the content of peroxide compounds was 0.06% in FS and 0.08% in SN-28. (4) The spectra of the irradiated PS films showed a formation of carbonyl groups ( $1700\text{ cm}^{-1}$  band); further, a weak band appeared at  $\sim 3400\text{ cm}^{-1}$  (OH groups), and a broad one at  $1100\text{--}1300\text{ cm}^{-1}$ . In SN-28, a  $1720\text{ cm}^{-1}$  band was observed which may due to aldehydes, ketones, or aromatic ethers. (5) Formation of volatile products was not observed after 60 hrs irradiation at  $60\text{--}70^\circ\text{C}$ . Here, the oxygen content in PS increased from 0.2 to 2%. Addition of 0.5 mole% of benzoyl peroxide increased the degree of destruction to the 6-8fold without any change in the spectra. An attempt was then made to stabilize SN-28 by adding substances having an absorption maximum at  $300\text{--}400\text{ m}\mu$ . Results: (a) 0.5 mole% admixtures of  $\beta$ -naphthyl salicylate, disalicylidene ethylene diamine, its copper salt, 4-propene oxide-2,4-dihydroxy benzophenone, 2,4-dibenzoyl resorcinol, a reaction product of anisole acetone with o-cresol, proved to be weak inhibitors. The effect of 0.5 mole% of 2-hydroxy-4-methoxy benzophenone, as well as that of the

Card 2/3